

15. LOSS OF BASEFLOW IN THE UPPER KAPUTONE STREAM – POSSIBLE CAUSES

The Board considered a report on the possible causes of loss of baseflow in the Upper Kaputone Stream.

In recent years the residents of the upper reaches of the Kaputone Stream have expressed concerns regarding the lack of baseflow in the Kaputone Stream, west of the Main North Road. The Styx Living Laboratory Trust and the Guardians of the Styx have also identified lack of hydrological data on the Styx River and Kaputone Stream flows.

The Board **resolved** to recommend to the Parks, Gardens and Waterways Committee the following:

1. The feasibility of developing a mathematical groundwater model of the Upper Kaputone Stream catchment should be investigated. (Time to investigate if developing of mathematical groundwater model is feasible – approximately 1 week, estimate is \$3,000 excl. GST. If it is feasible, additional time and funding will be required to develop the model).
2. Simultaneous monitoring of the M35_1205 and M35_3739 be continued and monitoring of the M35_1347 be restarted to better understand the dynamics of the underground flow into and out of the Upper Kaputone Stream catchment. (Estimate to restart M35_1347 is \$2,400 excl. GST per year).
3. Relevant meteorological data be collated for the purpose of estimating the evaporation and evapotranspiration over the last few years. This would allow a more reliable assessment of water balance dynamics of the Upper Kaputone Stream catchment. (Time to research, collate and analyse relevant meteorological data – approximately 3 weeks).
4. To better understand the effect of urbanisation on surface and groundwater flows, monitoring of the following parameters within Northwood site be undertaken:
 - Groundwater levels at the locations where historical groundwater level information is available.
 - Monitoring of groundwater flows around road and trench systems used for sewer and other services.
 - Groundwater flow rates from the existing and proposed groundwater discharge points.

The estimate for the above is in the order of \$25,000 – \$30,000. This could be incorporated into the next budget round 2005/2006 as an additional budget item).

5. That a substitution be identified to allow the work to be undertaken in 2004/05 or alternatively that the Council make provision for the work to be done in 2004/05.